

*Special article*

## **Developing Pathology Services in Resource Poor Settings: An Invitation to the International Academy of Pathology Meeting Bangkok 2014**

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### **ABSTRACT**

The delivery of high quality laboratory medicine services in developing countries of low economic resources poses particular problems. International efforts to help develop pathology take many forms and include educational and training initiatives by a number of organisations, although these are often disparate. In this article we will introduce some of the areas which pose problems for developing pathology in resource poor settings. As part of the upcoming IAP World Congress in Bangkok in October 2014, we are staging three sessions designed to discuss and inform pathologists around the region about these issues, and invite attendees at the conference interested in this area to these sessions.

**Keywords:** Pathology, Laboratory Medicine, Resource Poor Countries, Education, Training, International Development

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### **INTRODUCTION**

Histopathology, and the other disciplines of laboratory medicine including Microbiology, Virology, Immunology, Biochemistry and Haematology, are provided at very different levels in healthcare systems around the world, due to the challenges of expense in resource poor countries.

Here in Thailand and more generally Southeast Asia, Pathology is delivered as a high level ‘tertiary’ system along with other centres of excellence in countries such as Malaysia, Singapore and Hong Kong. However other countries in the region such as Cambodia, Myanmar and Laos face

different challenges in developing both laboratory medicine provision and staff. Such problems are similar around the world, but International efforts to help underdeveloped countries invest in pathology as part of their healthcare systems are uncoordinated<sup>1</sup>. However the common themes of training, recruiting and retaining staff in pathology apply across the globe, where medical graduates often prefer more front line specialties such as Medicine, Surgery, Obstetrics or Paediatrics. Enthusiastic the next generation to take up careers in Pathology is a challenge in all countries. However at each level Laboratory Medicine remains critical to delivering

high quality healthcare, a fact which needs communicating more effectively to Governments, opinion formers and funding agencies throughout the world.

### **The Problems:**

It is unlikely that there is a single best model for delivery of pathology services in resource poor countries. A one-size fits all guide to what services are appropriate, based solely on the economic wealth of a country, will be unlikely to reflect the differing demands of countries with varying health issues. For instance microbiological diagnosis may be a key requirement in tropical settings, although developing countries also face the challenge of cancer diagnostics, whereas developed countries tend to need greater input of biochemistry for metabolic diseases, or cytopathology for screening programmes such as cervical cytology.

Training (undergraduate, post graduate pathology training and specialization in laboratory medicine disciplines) remains key to delivering quality services. Investment must be logical, planned and appropriate, and include training of technical staff and access to support for technology. Participation of developing laboratories in Laboratory Accreditation and quality control schemes will also help raise quality.

Research into the most economically cost effective modes of diagnosis is lacking. For instance what are the relative health economic benefits to a population of basic versus advanced technologies – including costs of training and support. Is providing a reliable H&E or ZN stain worth more than the ability to perform immunohistochemistry? Many pathologists in developing settings work across disciplines, but when is the right time to invest in specialization?

One example of where economics guides pathology practice is the use of FNA based cytopa-

thology, a cheaper and quicker way to help cancer diagnostic work than the capital expense of developing a fixed histopathology laboratory. Running costs and servicing of equipment are not as problematic, but training of cytopathologists and technicians is important<sup>2</sup>. Donation of expensive equipment often results in broken ‘white elephants’ but appropriate donation of books, microscopes and money can help foster medical libraries and pathology departments, to train the pathologists of tomorrow. At the root of this is the need to educate both funders and the public of the key role of Pathology, to enthuse undergraduates about Pathology and increase its’ standing as a valuable career.

We need to develop better ways to communicate and advocate at Government level to promote pathology as a spending priority in Healthcare budgets, to develop of pathology services and raise awareness of the benefits this would offer to provision of front line medical services.

### **What's happening now?**

Many organizations around the world have an active interest in promoting pathology in health care systems in resource poor countries. These problems are not new, and have been addressed before in various ways with individual exchange programmes for training, collaborative support for diagnostic services<sup>3</sup>, telepathology initiatives and developing undergraduate and graduate training courses.

Here in Thailand an example of such programmes is training for doctors from Laos. Language and registration issues are important in training foreign medical graduates, but other problems exist. Taking a doctor to a developed setting and making them sit an exam that is often orientated towards pathology practice in the host

country, and may not provide relevant experience to the needs of the country in which they will practice. Returning a doctor to a resource poor setting without proper support can make their ability to practice challenging. We need to train technologists as well as pathologists, and forge closer links between institutions to foster support and the ability to participate in continuing medical education.

This emphasizes the need to train at appropriate levels, reward such experience with a benchmarked qualification and mentor such trainees after their return. The advent of digital pathology, email and the internet has made it easier to communicate, review cases and support foreign pathologists, but such schemes require considerable commitment of time and sometimes expense.

### **Setting the Agenda**

The key aim of all individuals and organizations interested in this field should be to institute practical frameworks to help developing countries, and coordinate the efforts of different stakeholders and organizations. We feel the time ripe to lead an international collaborative effort to standardize and recommend best practice in Laboratory medicine, by coordinating between different agencies and lobbying International organizations for the funding and logistical support that will be necessary to make this happen. Specifically we should draft Guidelines for Pathology Services to promote appropriate tiered models for Laboratory Medicine in countries of varying resource (low, middle and high-income) that could be disseminated through the World Health Organization.

### **An opportunity to learn about Pathology in Resource Poor settings: the IAP meeting schedule**

The areas of discussion above will be discussed in specific sessions at the forthcoming IAP

meeting. We have planned 2 presentation based sessions and 1 panel led group discussion seeking audience participation from interested pathologists, to enable us to gather experience from around the world on problems and solutions to these complex issues.

#### **1. Monday 6<sup>th</sup> October 3.00-5.30pm**

#### **'Delivering Pathology Services in Limited Resource Areas'**

Talks from Pathologists experienced in Cytopathology, Histopathology, Autopsy pathology, establishing Cancer Registries and Laboratory Management in the developing world

#### **2. Thursday October 9<sup>th</sup> 3.00-5.30pm**

#### **'Developing International Partnerships to Support Laboratory Medicine in Limited Resource Areas'**

1. In this session we will hear talks by representatives from organizations interested in promoting pathology in the Southeast Asian region, including the Asia Pacific branch of the IAP, the World Association of Pathology and Laboratory Medicine (WSPaLM), the International Committee of the Royal College of Pathology, UK, the Canadian and American Associations of Pathology.

#### **3. Friday 10<sup>th</sup> October 8.00-10.30am**

#### **'Panel Based Group Discussion'**

A unique opportunity for pathologists from Thailand and visitors from around the world to exchange views on the ways forward in this field, led by a panel of experts.

**We warmly invite all pathologists from Thailand to attend the sessions on this topic at the forthcoming IAP World Congress in Bangkok 5-10<sup>th</sup> October 2014.**

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